


Appendix K
Cost Estimate

COST ESTIMATE SUPPORT DATA RECAPITULATION

Project Title: WAG-5, OU 5-12, Phase I RD/RA Work Plan
Estimator: R. R. Honsinger
Date: May 3, 2000
Estimate Type: Project Support
File: 4951-A
Approved By: 

I. **SCOPE OF WORK:** *Brief description of the proposed project.*

The Project Support Cost Estimate includes document development and selective decommissioning and demolition (D&D) for Phase I of the WAG 5 RD/RA. The Phase I work sites at the Auxiliary Reactor Area (ARA) include ARA-02, ARA-07, ARA-08, ARA-13, ARA-16, ARA-21, and ARA-25.

A brief work scope at specific ARAs includes:

- A. ARA-02 Sanitary Waste System
Removal of the entire waste system, including three septic tanks, three manholes, one seepage pit, and piping.
- B. ARA-07 Seepage Pit
Removal of above grade components and abandon in place remaining pit. Backfill remaining pit with earthen material.
- C. ARA-08 Seepage Pit
Removal of concrete lid and abandon in place remaining pit. Backfill remaining pit with earthen material.
- D. ARA-13 Sewer System
Remove septic tank, distribution box, manhole, and interconnecting piping in their entirety. Removal of tank sludge and liquid prior to demolition.
- E. ARA-16 Radionuclide Tank and Hot Drains
Clean, flush, and remove underground hot drain lines. Remove tank contents. Flush and clean tank. Remove tank, concrete vault and gravel within vault.
- F. ARA-21 Septic Tank and Chlorine Tank
Removal of the septic tank, chlorine contact tank, and interconnecting piping. Removal of tank sludges prior to demolition.
- G. ARA-25 Hot Cell Foundation
Removal of concrete foundations and enclosed soils. Piping within foundation is removed by ARA-16 work scope. Backfill with earthen materials.

COST ESTIMATE SUPPORT DATA RECAPITULATION

- Continued -

Project Title: WAG-5, OU 5-12, Phase I RD/RA Work Plan

File: 4951-A

Page 2

- H. Estimates for the above ARA work scopes include waste disposal costs for all removed materials and tank contents.

Reference the Cost Estimate Detail Sheets for specific work scope descriptions associated with the above ARA work areas.

II. BASIS OF THE ESTIMATE: *Drawings, Design Report, Engineers Notes and/or other documentation upon which the estimate is originated.*

- A. Project Plans and Specifications from Engineer (D. Shanklin).
- B. Discussions with Engineer (D. Shanklin), Lead Engineer (K. Fritz), Project Manager (Frank Weber), Deputy Manager (Chris Hiaring), Requester (Beth Doult), and Supporting Organizations.
- C. WAG 5 Tank Waste Disposal Estimate, per R. P. Wells.
- D. WAG-5, OU 5-12, Phase I RD/RA Schedule Logic Diagram.
- E. Resource Summary Report dated 9/9/99.
- F. Unit costs and productivity were established from information received from the Project Engineer, Supporting Organizations, and published pricing manuals (*Rental Rate Blue Book for Construction* and *Richardson Engineering Services*).
- G. Labor rates are from *INEEL Cost Estimating Guide, FY 2000 Company Burdened Rates*.

III. ASSUMPTIONS: *Conditions statements accepted or supposed true without proof of demonstration. An assumption has a direct impact on total estimated cost.*

- A. The document development, characterization activities, and D&D activities will commence during FY 2000 and complete during the second quarter of FY 2001. Characterization will be completed prior to commencement of the D&D activities of this work scope.
- B. The costs of activities for this project have been escalated to meet this schedule. A failure to meet this estimated schedule could result in costs not reflected in this estimate. A re-evaluation of this estimate may be needed to resolve cost impacts from alternate schedules.

COST ESTIMATE SUPPORT DATA RECAPITULATION

- Continued -

Project Title: WAG-5, OU 5-12, Phase I RD/RA Work Plan

File: 4951-A

Page 3

- C. Provisions have not been made for any subcontracted work other than the off site laboratory analysis and roto-rooter cleaning of drain piping. It is assumed that the Operating Contractor's own personnel will complete all other work.
- D. All Radiological Control Technicians, and Engineering, Environmental, Safety, and Quality Engineering support will be available as needed.
- E. The actual work will not exceed the proposed work scope activities and/or quantities as shown on the Cost Estimating Detail Sheets.
- F. INEEL Operating Contractor wages will apply to this work, no overtime or shift differential wages have been included in this estimate.
- G. The General and Administrative fee (G&A) of 27%, Performance Incentive Factor (PIF) of 4%, and Procurement fee of 3.5% have been included in the burdened labor rates, equipment rate, Fuel Oil and Gasoline (FOG) rate and the total material cost columns where listed.
- H. This estimate does include allowances for training. Refer to Detail Item Report for the scope and quantities allowed.
- I. No rental monies or recovery charges will be required for D&D owned equipment that is to be used on this project. Maintenance and operating costs for D&D owned equipment are included in this estimate.
- J. It has been assumed that all Organizational 8000 costs will not be applied to this project.
- K. Assumptions of waste types, waste volume, waste classification, and disposal costs are from *WAG 5 Tank Disposal Cost Estimate*, by R. P. Wells, 4/10/00.
- L. ARA-02 Sanitary Waste System – Specific Assumptions:
 - The three septic tanks, one seepage pit, three manholes and approximately 989 feet of waste piping will be removed and disposed as mixed low-level waste (MLLW).
 - Assume concrete and gravel disposal at Envirocare, Utah.
 - Assume sludge disposal at WERF, INEEL.

COST ESTIMATE SUPPORT DATA RECAPITULATION

- Continued -

Project Title: WAG-5, OU 5-12, Phase I RD/RA Work Plan
File: 4951-A

Page 4

- Waste volumes assumed as 1.78 cu yd of concrete, 19.3 cu yd of concrete pipe, 7.5 cu yd of pumice blocks, 9.4 cu yd of gravel, and 1.5 cu yd of sludge.
- Characterization sampling is included.

M. ARA-07 Seepage Pit – Specific Assumptions:

- Only above grade materials to be removed and disposed as low-level radioactive waste (4.6 cu yd).
- Pit will be abandoned in place and backfilled with earthen material.
- Characterization sampling is not required or included.
- Assumes disposal at RWMC.

N. ARA-08 Seepage Pit – Specific Assumptions

- Concrete cover to be removed and disposed as low level radioactive waste (3 cu yd).
- Pit will be abandoned in place and backfilled with earthen material.
- Characterization sampling is not required or included.
- Assumes disposal at RWMC.

O. ARA-13 Sewer System – Specific Assumptions

- Assumes characterization sampling will disclose mixed low level waste and mixed low level waste with a TSCA component.
- Septic tank and distribution box will be pumped, cleaned, and removed in their entirety. Interconnecting piping will also be removed.
- Waste volumes assumed as 9.1 cu yd of concrete, 1.64 cu yd of concrete pipe, 5.2 cu yd of septic tank sludge, 1.11 cu yd of distribution box sludge, 20 gal of CAPSUR liquid, 9 cu yd of metal from distribution box, and .03 cu yd of brass screening.
- Waste disposal at Envirocare, Utah and ATG, Richland, WA.
- Soil disposal is not included in this estimate.
- Leech field piping to remain undisturbed.

P. ARA-16 Radionuclide Tank and Hot Drains – Specific Assumptions

- Tank contents to be removed and shipped off site for disposal (316 gallons).
- Tank and inlet piping to be cleaned, flushed and decontaminated. Rinsates to be shipped off site for disposal (800 gallons).

COST ESTIMATE SUPPORT DATA RECAPITULATION

- Continued -

Project Title: WAG-5, OU 5-12, Phase I RD/RA Work Plan

File: 4951-A

Page 5

- Liquids and sludges disposed at ATG, Richland, WA.
- Pipe cleaning with roto-rooter equipment will result in findings of no significant blockages or problems.
- Tank waste and rinsates will be classed as mixed low level waste with TSCA components.
- Stainless steel tank and piping will be boxed and disposed as low level radioactive waste (7 cu yd). Disposal at RWMC.
- Fencing will be disposed as low level radioactive waste (4.2 cu yd). Disposal at RWMC.
- Soil disposal not included in this estimate.
- Excavated soils to be replaced after tank and piping removal.
- Portable containments and PPEs with respirators are required for stainless steel piping and tank demolition.

Q. ARA-21 Septic Tank and Chlorine Tank – Specific Assumptions

- Characterization sampling is required, and assumes that sample analysis will allow disposal as clean waste.
- Clean waste (sludge and liquid) will be removed from septic tank (2 cu yd) and chlorine tank (1 cu yd) and disposed as clean waste.
- Septic tank and chlorine contact tank will be removed and disposed as clean waste (2.5 cu yd) to CFA landfill.
- Sanitary sewer piping and leech pit to remain in place.

R. ARA-25 Hot Cell Foundations and Soils

- Characterization sampling and analysis is required.
- Concrete foundations and enclosed soils to be disposed at RWMC as low level radioactive waste.
- Disposed soils include soils within three feet of foundation exteriors.
- Piping is removed as part of ARA-16 work scope.
- Soils and concrete to be loaded into soft sided waste boxes.
- PPEs with respirators required for field personnel.

IV. CONTINGENCY GUIDELINE IMPLEMENTATION: *The percentage used for contingency as determined by the contingency allowance guidelines can be altered to reflect the type of construction and conditions that may impact the total estimated cost.*

Contingency has not been included per direction from the Project Manager. Estimating Services recommends that a contingency analysis be prepared to assess project risks.

COST ESTIMATE SUPPORT DATA RECAPITULATION

- Continued -

Project Title: WAG-5, OU 5-12, Phase I RD/RA Work Plan
File: 4951-A

Page 6

V. OTHER COMMENTS/CONCERNS SPECIFIC TO THE ESTIMATE

- A. Costs from the Detailed Cost Estimate sheets are direct costs for material, labor, equipment, and special subcontracts. Costs for corresponding divisions on the Cost Estimate Summary sheet include all applicable indirect costs (overhead, profit, commission on subcontracts, sales tax, and bond).
- B. Costs for each activity represent present day costs.
- C. Costs for General and Administrative allowance (G & A), Performance Incentive Factor (PIF), and Procurement have been included in this estimate.
- D. The estimate is comprised of two packages. One package is for document development performed by the ER – WAG 5 forces, and includes the appropriate code of accounts. The other package is for the field work and field work documentation performed by D&D forces (Org 3110), and includes the D&D code of accounts. The Total Estimated Cost (TEC) is the sum of both packages.

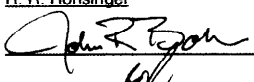

TEC Summary Report 1

Project Name: **WAG 5, OU 5-12, Phase I, ER**

Project Location: **Auxiliary Reactor Area (ARA), INEEL**

Project Number: **4951-A**

<u>ESTIMATE ELEMENT</u>	<u>Estimate Subtotal</u>	<u>Escalation</u> 0.00%	<u>Contingency</u> 0.00%	<u>TOTAL</u>
Total Estimated Cost (TEC)	\$149,013	\$0	\$0	\$149,013
<hr/>				
Total Estimated Cost (TEC)	\$149,013	\$0	\$0	\$149,013
Rounded TEC (Rounded to the nearest \$ 100,000)				\$150,000

Type of Estimate: <u>Project Support</u> Estimator: <u>R. R. Honsinger</u> Checked By: <u></u> Approved By: <u></u>	Remarks <p>Document Development by ER personnel.</p>
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Success Estimating and Cost Management System

Page No. 1

Project Summary Report

Project Name: **WAG 5, OU 5-12, Phase I, ER**
 Project Location: **Auxiliary Reactor Area (ARA), INEEL**
 Estimate Number: **4951-A**

Client: **C. Haring, B. Doult**
 Prepared By: **R. R. Honsinger**
 Estimate Type: **Project Support**

<u>Tree Level</u>	<u>COA</u>	<u>Description</u>	<u>Estimate Subtotal</u>	<u>Escalation</u>	<u>Contingency</u>	<u>Contingency %</u>	<u>TOTAL</u>
ER 1210		REMEDIAL DESIGN	\$98,265	\$0	\$0	0.00%	\$98,265
ER 1210.15		--Remedial Action (RA) Work Plan	\$45,375	\$0	\$0	0.00%	\$45,375
ER 1210.15		---T120 - Develop Streamlined Phase I Work Plan	\$32,917	\$0	\$0	0.00%	\$32,917
ER 1210.15		---T121 - Peer Review of Phase I Work Plan	\$5,496	\$0	\$0	0.00%	\$5,496
ER 1210.15		---T122 - Incorporate Comments to Phase I Work Plan	\$6,962	\$0	\$0	0.00%	\$6,962
ER 1210.20		--Miscellaneous Environmental Documents	\$1,588	\$0	\$0	0.00%	\$1,588
ER 1210.20		---T138 - Paperwork to Modify CERCLA Storage Unit	\$1,588	\$0	\$0	0.00%	\$1,588
ER 1210.21		--Characterization Documents	\$51,302	\$0	\$0	0.00%	\$51,302
ER 1210.21		---Health and Safety Plan	\$18,929	\$0	\$0	0.00%	\$18,929
ER 1210.21		-----T126 - Develop HASP	\$13,190	\$0	\$0	0.00%	\$13,190
ER 1210.21		-----T127 - Peer Review Hasp	\$3,155	\$0	\$0	0.00%	\$3,155
ER 1210.21		-----T128 - Incorporate Comments to Hasp	\$2,585	\$0	\$0	0.00%	\$2,585
ER 1210.21		---Sampling and Analysis Plan	\$32,373	\$0	\$0	0.00%	\$32,373
ER 1210.21		-----T123 - Develop Field Sample Plan	\$26,217	\$0	\$0	0.00%	\$26,217
ER 1210.21		-----T124 - Peer Review of FSP	\$2,296	\$0	\$0	0.00%	\$2,296
ER 1210.21		-----T125 - Incorporate Comments to FSP	\$3,859	\$0	\$0	0.00%	\$3,859
ER 1230		REMEDIAL ACTION	\$50,046	\$0	\$0	0.00%	\$50,046
ER 1230.22		--Closure Documentation	\$50,046	\$0	\$0	0.00%	\$50,046
ER 1230.22		---T165 - Prepare Final Inspection Report	\$11,296	\$0	\$0	0.00%	\$11,296

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Success Estimating and Cost Management System

Page No. 1

Project Summary Report

Project Name: **WAG 5, OU 5-12, Phase I, ER**

Project Location: **Auxiliary Reactor Area (ARA), INEEL**
 Estimate Number: **4951-A**

Client: **C. Hlaring, B. Doult**
 Prepared By: **R. R. Honsinger**
 Estimate Type: **Project Support**

<u>Tree Level</u>	<u>COA</u>	<u>Description</u>	<u>Estimate Subtotal</u>	<u>Escalation</u>	<u>Contingency</u>	<u>Contingency %</u>	<u>TOTAL</u>
ER 1230.22		—T168 - Resolve Agency Comments Prefinal Inspection	\$8,137	\$0	\$0	0.00%	\$8,137
ER 1230.22		—T171 - Prepare Phase I RA Report	\$17,384	\$0	\$0	0.00%	\$17,384
ER 1230.22		—T172 - IRC Review Phase I RA Report	\$2,849	\$0	\$0	0.00%	\$2,849
ER 1230.22		—T173 - Incorporate IRC Comments Phase I Report	\$4,835	\$0	\$0	0.00%	\$4,835
ER 1230.22		—T175 - Incorporate Agency Comments Phase I RA Report	\$5,545	\$0	\$0	0.00%	\$5,545
ER 1400		Non-Org G&A and PIF	\$701	\$0	\$0	0.00%	\$701
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Total	Project Level TPC - Cleanup		\$149,013	\$0	\$0	0.00%	\$149,013

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Page No. 2

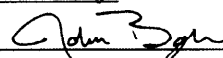

TEC Summary Report 1

Project Name: **WAG 5, OU 5-12, Phase I, D&D**

Project Location: **Auxiliary Reactor Area (ARA), INEEL**

Project Number: **4951-A**

<u>ESTIMATE ELEMENT</u>	<u>Estimate Subtotal</u>	<u>Escalation</u>	<u>Contingency</u>	<u>TOTAL</u>
		1.08%	0.00%	
Total Estimated Cost (TEC)	\$1,643,637	\$17,819	\$0	\$1,661,456
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		1.08%	0.00%	
Total Estimated Cost (TEC)	\$1,643,637	\$17,819	\$0	\$1,661,456
Rounded TEC (Rounded to the nearest \$ 10000)				\$1,660,000

<p>Type of Estimate: <u>Project Support</u></p> <p>Estimator: <u>R. R. Honsinger</u></p> <p>Checked By: <u></u></p> <p>Approved By: <u></u></p>	<p>Remarks</p> <p>Field work and documentation by D&D forces with D&D Code of Accounts.</p>
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Success Estimating and Cost Management System

Page No. 1

K-10

Project Summary Report

Project Name: **WAG 5, OU 5-12, Phase I, D&D**

Project Location: **Auxiliary Reactor Area (ARA), INEEL**

Estimate Number: **4951-A**

Client: **C. Haring, B. Douth**

Prepared By: **R. R. Honsinger**

Estimate Type: **Project Support**

<u>Tree Level</u>	<u>COA</u>	<u>Description</u>	<u>Estimate Subtotal</u>	<u>Escalation</u>	<u>Contingency</u>	<u>Contingency %</u>	<u>TOTAL</u>
1.1	220000	CHARACTERIZATION:	\$413,557	\$5,169	\$0	0.00%	\$418,726
1.1.5	226000	--Characterization Sample Collection, Analysis & Validation	\$413,557	\$5,169	\$0	0.00%	\$418,726
1.1.5.0	226010	---T134 - Prepare Work Orders (WO) for Sample Collection at ARA-13, 16, and 21	\$4,487	\$56	\$0	0.00%	\$4,543
1.1.5.1	226020	---T141- Perform Physical Sample Collection at ARA-13, 16, and 21	\$2,788	\$35	\$0	0.00%	\$2,822
1.1.5.3	226040	---T144 - Sample Management Office (SMO) & Risk Support	\$116,580	\$1,457	\$0	0.00%	\$118,037
1.1.5.4	226050	---T144 - Analytical Services	\$284,127	\$3,552	\$0	0.00%	\$287,679
1.1.5.6	226000	---T147, 153, 158 - Verification Sampling - ROM	\$2,788	\$35	\$0	0.00%	\$2,822
1.1.5.7	226000	---ARA-25 Verification Sampling	\$1,394	\$17	\$0	0.00%	\$1,411
1.1.5.8	226020	---Perform Physical Sample Collection at ARA-02	\$1,394	\$17	\$0	0.00%	\$1,411
1.2	230000	PROJECT PREPARATION:	\$9,576	\$120	\$0	0.00%	\$9,695
1.2.0	230500	--T134 - Davis Bacon Determination	\$2,741	\$34	\$0	0.00%	\$2,776
1.2.0.0	230510	---T13 - Davis Bacon Determination	\$2,741	\$34	\$0	0.00%	\$2,776
1.2.3	241000	--T134 - Readiness Assessments (RA)	\$6,834	\$85	\$0	0.00%	\$6,920
1.2.3.0	241010	---Prepare Readiness Assessments (RA)	\$6,834	\$85	\$0	0.00%	\$6,920
1.4	240000	T134, T135 - FACILITY PROJECT OPERATIONS:	\$262,251	\$3,278	\$0	0.00%	\$265,530
1.4.0	241000	--T134 - D&D Work Orders (WO)	\$28,620	\$358	\$0	0.00%	\$28,977
1.4.0.0	241010	---Preparation of D&D WO's for ARA-02	\$6,787	\$85	\$0	0.00%	\$6,872

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Success Estimating and Cost Management System

Page No. 1

Project Summary Report

Project Name: **WAG 5, OU 5-12, Phase I, D&D**

Project Location: **Auxiliary Reactor Area (ARA), INEEL**
Estimate Number: **4951-A**

Client: **C. Haring, B. Douth**
Prepared By: **R. R. Honsinger**
Estimate Type: **Project Support**

<u>Tree Level</u>	<u>COA</u>	<u>Description</u>	<u>Estimate Subtotal</u>	<u>Escalation</u>	<u>Contingency</u>	<u>Contingency %</u>	<u>TOTAL</u>
1.4.0.1	241010	----Preparation of D&D WO's for ARA-16	\$10,916	\$136	\$0	0.00%	\$11,052
1.4.0.2	241010	----Preparation of D&D WO for ARA-07,08,13,21(Misc Waste Systems)	\$10,916	\$136	\$0	0.00%	\$11,052
1.4.2	242000	--T150 - D&D Materials/Services/Equipment	\$17,382	\$217	\$0	0.00%	\$17,600
1.4.2.0	242010	----Procurement of D&D Materials/Services/Equipment	\$17,382	\$217	\$0	0.00%	\$17,600
1.4.2.0.1		-----T150 - Procurement for ARA-16, Rough Order of Magnitude Pricing	\$17,382	\$217	\$0	0.00%	\$17,600
1.4.3	243100	---General Requirements For Field Work	\$216,249	\$2,703	\$0	0.00%	\$218,953
1.4.3.0	243110	----Project Mobilization/Set Up/Start Up	\$8,658	\$108	\$0	0.00%	\$8,766
1.4.3.0.1	243110	-----T140 - Mobilize to ARA	\$3,461	\$43	\$0	0.00%	\$3,505
1.4.3.0.2	243110	-----T145- Mobilize to ARA-02	\$1,732	\$22	\$0	0.00%	\$1,754
1.4.3.0.3	243110	-----T151 - Mobilize at ARA-16	\$1,732	\$22	\$0	0.00%	\$1,754
1.4.3.0.4	243110	-----T156 - Re Mobilize at Misc Waste System Sites	\$1,732	\$22	\$0	0.00%	\$1,754
1.4.3.1	248000	---Direct Project Field Support/Supplies/Equipment	\$163,611	\$2,045	\$0	0.00%	\$165,656
1.4.3.2	248000	---Field Personnel Training	\$25,438	\$318	\$0	0.00%	\$25,756
1.4.3.2.0	248000	-----Project Access Requirement Training	\$23,475	\$293	\$0	0.00%	\$23,769
1.4.3.2.1	248000	-----Monthly Incidental Requirement Training	\$1,962	\$25	\$0	0.00%	\$1,987
1.4.3.3	248000	---Upgrade/Repair/PM Existing Facility Equipment	\$4,801	\$60	\$0	0.00%	\$4,861
1.4.3.4	243150	---Project Demobilization/Final Clean Up	\$13,741	\$172	\$0	0.00%	\$13,913
1.4.3.4.1	243150	-----T143- De-Mob at Misc Septic Systems Sites	\$2,592	\$32	\$0	0.00%	\$2,624
1.4.3.4.2	243150	-----T149- De-Mob at ARA-02	\$2,592	\$32	\$0	0.00%	\$2,624

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Success Estimating and Cost Management System

Page No. 2

Project Summary Report

Project Name: **WAG 5, OU 5-12, Phase I, D&D**

Project Location: **Auxiliary Reactor Area (ARA), INEEL**
Estimate Number: **4951-A**

Client: **C. Haring, B. Douth**
Prepared By: **R. R. Honsinger**
Estimate Type: **Project Support**

<u>Tree Level</u>	<u>COA</u>	<u>Description</u>	<u>Estimate Subtotal</u>	<u>Escalation</u>	<u>Contingency</u>	<u>Contingency %</u>	<u>TOTAL</u>
1.4.3.4.3	243150	-----T155- De-Mob at ARA-16	\$3,373	\$42	\$0	0.00%	\$3,415
1.4.3.4.4	243150	-----T160- De-Mob at Misc Waste Systems Sites	\$2,592	\$32	\$0	0.00%	\$2,624
1.4.3.4.5	243150	-----T164 - Total De-Mobilization	\$2,592	\$32	\$0	0.00%	\$2,624
1.5	243200	FACILITY DECONTAMINATION & DISMANTLEMENT (D&D):	\$342,882	\$4,286	\$0	0.00%	\$347,168
1.5.1	243500	---Contaminated Demolition	\$313,589	\$3,920	\$0	0.00%	\$317,509
1.5.1.2	243530	---Selective Demolition	\$313,589	\$3,920	\$0	0.00%	\$317,509
1.5.1.2.1	243530	-----T146 - ARA-02 Field Work	\$59,408	\$743	\$0	0.00%	\$60,150
1.5.1.2.1.	243530	-----ARA-02 Excavation	\$12,539	\$157	\$0	0.00%	\$12,696
1.5.1.2.1.	243530	-----ARA-02 Piping Demolition	\$18,506	\$231	\$0	0.00%	\$18,737
1.5.1.2.1.	243530	-----ARA-02 Septic Tanks Demolition	\$7,360	\$92	\$0	0.00%	\$7,452
1.5.1.2.1.	243530	-----ARA-02 Seepage Pit Demolition	\$7,360	\$92	\$0	0.00%	\$7,452
1.5.1.2.1.	243530	-----ARA-02 Backfill	\$13,644	\$171	\$0	0.00%	\$13,815
1.5.1.2.2	243530	-----T152 - ARA-16 Field Work	\$145,480	\$1,818	\$0	0.00%	\$147,298
1.5.1.2.2.		-----ARA-16 Excavation	\$14,986	\$187	\$0	0.00%	\$15,173
1.5.1.2.2.		-----ARA-16 Cleaning Underground Pipe	\$16,361	\$205	\$0	0.00%	\$16,566
1.5.1.2.2.		-----ARA-16 Piping Demolition	\$38,427	\$480	\$0	0.00%	\$38,907
1.5.1.2.2.		-----ARA-16 Tank Cleaning - Part 1	\$17,817	\$223	\$0	0.00%	\$18,040
1.5.1.2.2.		-----ARA-16 Tank Cleaning - Part 2	\$6,795	\$85	\$0	0.00%	\$6,880
1.5.1.2.2.		-----ARA-16 Tank Cleaning - Part 3	\$8,982	\$112	\$0	0.00%	\$9,094
1.5.1.2.2.		-----ARA-16 Tank Demolition	\$29,857	\$373	\$0	0.00%	\$30,230
1.5.1.2.2.		-----ARA-16 Backfill	\$12,254	\$153	\$0	0.00%	\$12,408
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05/03/2000 15:05:47

Success Estimating and Cost Management System

Page No. 3

Project Summary Report

Project Name: **WAG 5, OU 5-12, Phase I, D&D**

Project Location: **Auxiliary Reactor Area (ARA), INEEL**
Estimate Number: **4951-A**

Client: **C. Haring, B. Doult**
Prepared By: **R. R. Honsinger**
Estimate Type: **Project Support**

<u>Tree Level</u>	<u>COA</u>	<u>Description</u>	<u>Estimate Subtotal</u>	<u>Escalation</u>	<u>Contingency</u>	<u>Contingency %</u>	<u>TOTAL</u>
1.5.1.2.3	243530	-----T142- ARA-07 Field Work	\$7,924	\$99	\$0	0.00%	\$8,023
1.5.1.2.3.	243530	-----ARA-07 Demo Fence, Wooden Cover, and Block	\$4,802	\$60	\$0	0.00%	\$4,862
1.5.1.2.3.	243530	-----ARA-07 Backfill	\$3,122	\$39	\$0	0.00%	\$3,161
1.5.1.2.4	243530	-----T142 - ARA-08 Field Work	\$3,122	\$39	\$0	0.00%	\$3,161
1.5.1.2.4.	243530	-----ARA-08 Excavation and Backfill	\$3,122	\$39	\$0	0.00%	\$3,161
1.5.1.2.5	243530	-----T157 - ARA-13	\$34,249	\$428	\$0	0.00%	\$34,677
1.5.1.2.5.	243530	-----ARA-13 Septic Tank	\$13,936	\$174	\$0	0.00%	\$14,110
1.5.1.2.5.	243530	-----ARA-13 Piping-Manhole to Septic Tank to Dist. Box	\$6,497	\$81	\$0	0.00%	\$6,578
1.5.1.2.5.	243530	-----ARA-13 Distribution Box	\$13,816	\$173	\$0	0.00%	\$13,989
1.5.1.2.6	243530	-----T157 - ARA-21 Field Work	\$18,858	\$236	\$0	0.00%	\$19,093
1.5.1.2.6.	243530	-----ARA-21 Chlorine Tank and Septic Tank	\$11,444	\$143	\$0	0.00%	\$11,587
1.5.1.2.6.	243530	-----ARA-21 Seepage Pit	\$7,414	\$93	\$0	0.00%	\$7,506
1.5.1.2.7	243530	-----ARA-25 Field Work	\$44,549	\$557	\$0	0.00%	\$45,106
1.5.1.2.7.		-----ARA-25 Hot Cell Foundations	\$44,549	\$557	\$0	0.00%	\$45,106
1.5.4	244900	--T162 and T163 - Final Site Restoration	\$29,293	\$366	\$0	0.00%	\$29,659
1.5.4.0	244910	---T162 - Import & Placement Of Fill Materials	\$24,078	\$301	\$0	0.00%	\$24,379
1.5.4.2	244930	---T163 - Seeding of Site & Borrow Pits	\$5,215	\$65	\$0	0.00%	\$5,280
1.6	245000	DISPOSAL & TRANSPORTATION OF WASTE:	\$80,734	\$1,009	\$0	0.00%	\$81,743
1.6.1	245200	--T148, T154, T159 - Disposal of Mixed Low Level Waste (MLLW)	\$65,970	\$825	\$0	0.00%	\$66,795

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05/03/2000 15:05:47

Success Estimating and Cost Management System

Page No. 4

K-14

Project Summary Report

Project Name: **WAG 5, OU 5-12, Phase I, D&D**

Project Location: **Auxiliary Reactor Area (ARA), INEEL**

Estimate Number: **4951-A**

Client: **C. Haring, B. Doult**

Prepared By: **R. R. Honsinger**

Estimate Type: **Project Support**

<u>Tree Level</u>	<u>COA</u>	<u>Description</u>	<u>Estimate Subtotal</u>	<u>Escalation</u>	<u>Contingency</u>	<u>Contingency %</u>	<u>TOTAL</u>
1.6.1.1	245220	—T154 - ARA 16 Disposal of MLLW	\$37,240	\$466	\$0	0.00%	\$37,706
1.6.1.2		—T159 - ARA 13 Disposal of MLLW	\$9,740	\$122	\$0	0.00%	\$9,862
1.6.1.3		—T148 - ARA 02 Disposal of MLLW	\$18,990	\$237	\$0	0.00%	\$19,227
1.6.5	246200	--T154, T159 - Transportation of Mixed Low Level Waste (MLLW)	\$14,764	\$185	\$0	0.00%	\$14,949
1.6.5.1	246220	—T148, T154, T159 - Transport MLLW	\$14,764	\$185	\$0	0.00%	\$14,949
1.7	248000	T167 - PROJECT MANAGMENT AND SUPPORT:	\$316,540	\$3,957	\$0	0.00%	\$320,497
1.7.0	248100	--Project Management (PM) Support	\$14,209	\$178	\$0	0.00%	\$14,387
1.7.1	248120	--Project Engineer (PE) Support	\$50,747	\$634	\$0	0.00%	\$51,381
1.7.2	248140	--D&D Operations Lead (OL) Support	\$24,703	\$309	\$0	0.00%	\$25,012
1.7.3	248200	--Prepare & Maintain Project Progress Photos & Books	\$5,310	\$66	\$0	0.00%	\$5,377
1.7.4	248300	--Supporting Non Field Personnel during Project Duration	\$68,454	\$856	\$0	0.00%	\$69,310
1.7.5	248400	--Supporting Safety Field Personnel during Field Work	\$144,893	\$1,811	\$0	0.00%	\$146,705
1.7.6	248500	--Non Craft Personnel Training	\$8,224	\$103	\$0	0.00%	\$8,327
1.7.6.1	248520	---Monthly Incidental Requirement Training	\$8,224	\$103	\$0	0.00%	\$8,327
1.9	999999	NON-ORGANIZATIONAL G&A AND PIF:	\$218,097	\$0	\$0	0.00%	\$218,097

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05/03/2000 15:05:47

Success Estimating and Cost Management System

Page No. 5

Project Summary Report							
Project Name: WAG 5, OU 5-12, Phase I, D&D		Client: C. Haring, B. Doult					
Project Location: Auxiliary Reactor Area (ARA), INEEL		Prepared By: R. R. Honsinger					
Estimate Number: 4951-A		Estimate Type: Project Support					
<u>Tree Level</u>	<u>COA</u>	<u>Description</u>	<u>Estimate Subtotal</u>	<u>Escalation</u>	<u>Contingency</u>	<u>Contingency %</u>	<u>TOTAL</u>
Total DECONTAMINATION & DISMANTLEMENT (D&D)			\$1,643,637	\$17,819	\$0	0.00%	\$1,661,456

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05/03/2000 15:05:47

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Page No. 6